

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

Claim 1 (currently amended): A hollow cathode sputtering target comprising an inner bottom face that forms a non-erosion portion of a plastic-worked hollow cathode sputtering target and a cylindrical inner peripheral face that forms an erosion portion of the plastic-worked hollow cathode sputtering target, wherein, upon manufacture, a surface roughness (Ra) of said inner bottom face of said non-erosion portion of the plastic-worked hollow cathode sputtering target being  $Ra=1.0\mu m$  and being equal to or less than a surface roughness (Ra) of said cylindrical inner peripheral face of said erosion portion of the plastic-worked hollow cathode sputtering target.

Claims 2-6 (canceled).

Claim 7 (currently amended): A surface finishing method of a hollow cathode sputtering target comprising the steps of forming a hollow body of the hollow cathode sputtering target via plastic working, and, after said plastic working, polishing and etching an inner bottom face of the target that forms a non-erosion portion of the hollow cathode sputtering target so as to make the surface roughness (Ra) of the inner bottom face, upon manufacture,  $Ra=1.0\mu m$  and equal to or less than a surface roughness (Ra) of a cylindrical inner peripheral face of the hollow cathode sputtering target that forms an erosion portion of the hollow cathode sputtering target.

Claim 8 (canceled).

Claim 9 (previously presented): A hollow cathode sputtering target according to claim 1, wherein said surface roughness of said inner bottom face of said non-erosion portion of the hollow cathode sputtering target is  $Ra=0.5\mu m$ .

Claim 10 (canceled).

Claim 11 (previously presented): A hollow cathode sputtering target according to claim 9, wherein said target has an outer peripheral edge with a rough face and wherein said outer peripheral edge forms part of said non-erosion portion of the hollow cathode sputtering target.

Claim 12 (previously presented): A hollow cathode sputtering target according to claim 11, wherein said rough face of said outer peripheral edge is an abrasive blasted face.

Claim 13 (previously presented): A hollow cathode sputtering target according to claim 12, wherein said hollow cathode sputtering target is formed from a cladding material.

Claims 14-15 (canceled).

Claim 16 (previously presented): A hollow cathode sputtering target according to claim 1, wherein said target has an outer peripheral edge with a rough face and wherein said outer peripheral edge forms part of said non-erosion portion of the hollow cathode sputtering target.

Claim 17 (previously presented): A hollow cathode sputtering target according to claim 16, wherein said rough face of said outer peripheral edge is an abrasive blasted face.

Claim 18 (previously presented): A hollow cathode sputtering target according to claim 17, wherein said hollow cathode sputtering target is formed from a cladding material.

Claims 19-21 (canceled).

Claim 22 (previously presented): A hollow cathode sputtering target according to claim 1, wherein said hollow cathode sputtering target is formed from a cladding material.

Claim 23 (canceled).

Claim 24 (previously presented): A method according to claim 7, wherein said surface roughness of said inner bottom face is made to be  $Ra=0.5\mu m$  during said polishing and etching step.

Claims 25-26 (canceled)

Claim 27 (currently amended): A hollow cathode sputtering target, ~~comprising~~  
consisting of:

a cup-shaped body having an inner peripheral surface defining a hollow cavity  
within the cup-shaped body and an outer peripheral surface on an exterior  
of said cup-shaped body, said inner peripheral surface being a sputtering

face of said cup-shaped body and said outer peripheral face being a non-erosion face;

said inner peripheral surface ~~including~~ consisting of a cylindrical peripheral face, a bottom face, and a curved face defining a boundary between said cylindrical face and said bottom face, said cylindrical peripheral face forming an erosion area of said sputtering face that is eroded during a sputtering operation when a high density plasma is generated within the hollow cavity of the cup-shaped body, and said bottom face forming a non-erosion portion of said cup-shaped body;

a surface roughness (Ra) of said bottom face, upon manufacture, being  $Ra=1.0\mu\text{m}$  and being less than a surface roughness (Ra) of said cylindrical inner peripheral face.

Claim 28 (previously presented): A hollow cathode sputtering target according to claim 27, wherein said surface roughness of said bottom face is  $Ra=0.5\mu\text{m}$ .

Claim 29 (previously presented): A hollow cathode sputtering target according to claim 27 wherein said cup-shaped body is made of titanium (Ti).

Claim 30 (previously presented): A hollow cathode sputtering target according to claim 27 wherein said cup-shaped body is made of tantalum (Ta).

Claim 31 (currently amended): A hollow cathode sputtering target according to claim 1, wherein said surface roughness (Ra) of said inner bottom face, upon manufacture, is less than said surface roughness (Ra) of said cylindrical inner peripheral face.

Claim 32 (currently amended): A method according to claim 7, wherein, during said polishing and etching step, the surface roughness (Ra) of the inner bottom face, upon manufacture, is made to be less than the surface roughness (Ra) of the cylindrical inner peripheral face.